
PART III.

CULTURAL AND ECONOMIC DETAILS
OF
COTTON PRODUCTION.

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REFERENCE LIST
OF
NAMES AND ADDRESSES OF CORRESPONDENTS.

NORTHWEST GEORGIA.

Murray.—WILLIAM J. JOHNSON, Spring Place, January 17, 1880.
Catoosa.—W. J. WHITSITT, Ringgold, February 10, 1881.
Dade.—T. J. LUMPKIN, M. D., Rising Fawn, March 25, 1879; W. A. CHAMBERS, Morganville, December 23, 1880.
Walker.—F. M. YOUNG, Greenbush, January 19, 1880; J. A. CLEMENTS, Villanow, December 23, 1879; W. F. TAPP, Valley Store, Chattooga county, February 7, 1880.
Chattooga.—A. P. ALLGOOD, Trion Factory, April 21, 1880; C. D. HILL, Raccoon Mills, January 4, 1880.
Bartow.—A. F. WOOLLEY, Kingston, January 25, 1880; J. O. MCDANIEL, Allatoona, February 2, 1880.
Floyd.—GEORGE S. BLACK, Rome, April 22, 1880; JOHN H. DENT, Cave Spring.
Polk.—T. J. THOMPSON, Rockmart, January 1, 1880; S. M. H. BYRD, Cedartown, December 16, 1879.
Gordon.—AARON ROFF, Calhoun, January 27, 1881.

METAMORPHIC OR BLUE RIDGE AND MIDDLE GEORGIA REGION.

Towns.—J. W. HOLMES and HOWELL C. STANDRIDGE, Hiawassee. (No details.)
Fannin.—ADAM DAVENPORT, Morganton, December 16, 1879.
White.—J. H. NICHOLS, Nacoochee. (No details.)
Union.—C. J. WELBORN, Blairsville, January 8, 1880.
Lumpkin.—J. C. BRITTAIN, Dahlonega. (No details.)
Habersham.—C. H. SUTTON, Clarksville, December 15, 1879.
Franklin.—O. C. WYLY, Carnesville.
Hart.—C. W. SEIDELL, Hartwell, January 10, 1880.
Banks.—C. C. SANDERS, Gainesville, Hall county, June 19, 1880.
Hall.—DR. M. F. STEPHENSON, Gainesville, December 20, 1879.
Forsyth.—H. C. KELLOGG, Pleasant Grove, January 8, 1880.
Cherokee.—M. S. PADEN, Woodstock, January 5, 1880; ELIAS C. FIELD, Canton, July 5, 1880.
Madison.—R. M. MERONY, Danielsville, February 14, 1880.
Elbert.—ROBERT HESTER, Elberton.
Jackson.—E. M. THOMPSON, Jefferson, February 6, 1880.
Clarke.—Prof. DAVID C. BARROW, JR., Athens, September 29, 1880.
Oglethorpe.—WILLIAM L. JOHNSON, Stephens, February 10, 1880.
Wilkes.—JOHN T. WINGFIELD, Washington, April 5, 1880.
Lincoln.—C. R. STROTHER, Lincolnton, January 1, 1880; N. A. CRAWFORD, Lincolnton, January 15, 1880.
Walton.—R. H. CANNON, Walnut Grove, November 20, 1880.
Gwinnett.—R. D. WINN, Lawrenceville, December 25, 1879.
Cobb.—JAMES ROSWELL KING, Roswell, March 20, 1880; H. M. HAMMETT, Marietta, December 10, 1879.
Paulding.—J. R. PREWETT, Dallas, July 8, 1880.
Haralson.—W. C. MCBRAYER, Draketown, July 8, 1880.
Carroll.—R. H. SPRINGER, Whitesburg, December 21, 1879.
Douglas.—F. M. DUNCAN, Douglasville, June 26, 1880; J. E. HENLEY, M. D., Campbellton, June 18, 1880.
Fulton.—THOMAS MOORE, Boltonville, December 22, 1879; J. C. TUCKER, Ben Hill post-office, January, 1880.
De Kalb.—T. J. FLAKE, Panthersville, December 26, 1879; F. A. RAGSDALE, Lithonia, January 22, 1880.
Rockdale.—WILLIAM L. PEEK, Conyers, January 26, 1880.
Newton.—JESSE W. WALKER, Social Circle, Walton county, January 10, 1880; LEONIDAS F. LIVINGSTON, Covington, July 1, 1880.
Morgan.—GRANT D. PERRY, Madison, February 4, 1880.
Greene.—J. B. Y. WARNER, Greensboro', February 12, 1880.
Taliaferro.—LIONEL L. VEAZY, Crawfordsville, May 6, 1880.
Columbia.—H. R. CASEY, Appling, January 1, 1880.
McDuffie.—A. E. STURGIS, Thomson, March 29, 1880.

Warren.—JOHN S. JOHNSON, Warrenton, December 25, 1879; JAMES A. SHIVERS, Warrenton, December 29, 1879.
Putnam.—J. T. DENNIS, Eatonton, March 27, 1880; ROBERT C. HUMBER, Eatonton, January 6, 1880.
Jasper.—WILLIAM D. MADDOX, Monticello, March 29, 1880; WILLIS NEWTON, Shady Dale, December 15, 1879.
Henry.—J. A. C. WYNN, Wynn's Mills, December 30, 1879.
Fayette.—ISAAC G. WOOLSEY, M. D., Fayetteville, July 1, 1880.
Spalding.—J. M. KELB, S. F. GRAY, and H. T. PATTERSON, Sunny Side, February 24, 1880.
Coweta.—BENJAMIN LEIGH, Newnan, December, 1879; AUGUSTUS W. STOKES, Newnan, January 1, 1880.
Heard.—R. H. JACKSON, Franklin, June 10, 1880.
Troup.—WILLIAM P. BEASLEY, La Grange; C. W. MABRY, La Grange, January 1, 1880.
Meriwether.—J. E. G. TERRELL, Greenville.
Baldwin.—JAMES C. WHITAKER, Milledgeville, March 5, 1880.
Upson.—E. W. ROSE, The Rock, June 19, 1880; THOMAS J. MIDDLEBROOKS, Barnesville, December 23, 1879.
Harris.—JAMES W. MOBLEY, Hamilton, January 22, 1880.
Talbot.—WILLIAM H. ELLISON, Shiloh, Harris county, January 5, 1880; W. M. GORMAN, Geneva, June 17, 1880.
Crawford.—B. LE SUEUR, Knoxville, April 20, 1880.
Bibb.—W. D. H. JOHNSON, Bolingbroke, February 9, 1880.
Muscogee.—JAMES C. COOK, Columbus, January 5, 1880.
Hancock.—W. J. NORTHEN, Sparta, October 30, 1880.
Monroe.—R. C. MCGOUGH, Forsyth, February 17, 1881.

CENTRAL COTTON REGION.

Richmond.—A. H. McLAWS, Augusta, March 31, 1880.
Burke.—J. B. JONES, Herndon, February 13, 1880; W. B. JONES, Herndon, January 2, 1880.
Jefferson.—A. E. TARVER, Bartow, March 12, 1880.
Glascock.—JAMES L. NEAL, Warrenton, Warren county, July 12, 1880.
Washington.—H. N. HOLLIFIELD, Sandersville, February, 1880.
Wilkinson.—T. N. BEALL, Irwinton, June 1, 1880.
Twiggs.—F. D. WIMBERLEY, JR., Twiggsville, April 15, 1880.
Laurens.—ROBERT WAYNE, Dublin, December 27, 1879; J. F. CHAPPELL, M. D., Laurens Hill, March 15, 1880.
Taylor.—JAMES A. ADAMS, Reynolds, January 30, 1880.
Macon.—A. J. CHEVES, Montezuma, December 22, 1879.
Schley.—THOMAS F. RANEY, SR., Ellaville, January 5, 1880.
Martin.—GEORGE W. C. MUNRO, Buena Vista, March 30, 1880.
Chattahoochee.—J. A. WOOLDRIDGE, M. D., Jamestown, March 9, 1880.
Stewart.—W. H. TATUM, Hannahatchee, June 23, 1880.
Webster.—JAMES P. WALKER, Preston, August 21, 1880; JUBILEE SMITH, Preston, July 8, 1880.
Sumter.—SAMUEL S. BIRD, M. D., Americus; C. C. SHEPARD, Americus, March 6, 1880.
Quitman.—A. OGLETREE, Georgetown, March 4, 1880.
Randolph.—M. A. McNULTY, Cuthbert, July 1, 1880.
Clay.—F. K. FREEMAN, Fort Gaines, June 10, 1880.
Calhoun.—W. A. BECKCOM, Arlington, March 1, 1880.
Dougherty.—Messrs. WELCH and BACON, Albany, July 2, 1880.
Early.—JOHN B. MULLIGAN, Blakely; DENNIS M. WADE, Blakely, February 23, 1880.

LONG-LEAF PINE AND WIRE-GRASS REGION.

Decatur.—JOHN E. DICKERSON, Bainbridge, December 22, 1879.
Thomas.—R. H. HARDAWAY, Thomasville, February 17, 1880; JAMES H. HAYES, Cairo, January 7, 1880.
Brooks.—R. I. DENMARK, Quitman, January 5, 1880.
Screven.—HON. GEORGE R. BLACK, Sylvania, January 1, 1880; R. D. SHARPE, Parramore's Hill, December 20, 1879.
Johnson.—JAMES H. HICKS, Wrightsville, January 23, 1880.
Emanuel.—E. H. EDENFIELD, Swainsboro', June 19, 1880.
Montgomery.—E. MCRAE, Mount Vernon, June 12, 1880.
Dodge.—DAVID SAPP, Du Bois, July 9, 1880.
Telfair.—D. F. MCRAE, Sumter City.
Wilcox.—S. D. FULLER, House Creek, January 14, 1880.
Dooly.—JOHN H. WHITSETT, Vienna, February 2, 1880.
Worth.—WILLIAM A. HARRIS, Isabella, May 1, 1880.
Baker.—J. H. HAND, M. D., Leary, Calhoun county, February 14, 1880.
Mitchell.—W. W. SPENCE, Camilla, March 21, 1880.
Colquitt.—J. B. NORMAN, Moultrie, December 22, 1879.
Lowndes.—N. B. OUSLEY (late of Lowndes county), Fort Valley, Houston county, February 3, 1880.
Berrien.—HENRY T. PEEPLES, Nashville, December 22, 1879.
Coffee.—TIMOTHY FUSSELL, Kirkland, February 15, 1880; A. M. FRASER, Hazlehurst.
Appling.—BENJAMIN MILIKIN, Holmesville, July 7, 1880.
Pierce.—HENRY J. SMITH, M. D., Blackshear, December 13, 1879.
Wayne.—JAMES W. HARPER, Gardi, July 1, 1880; G. W. STANSELL, Jessup.
Tattnall.—JOHN HUGHEY, Reidsville, October 7, 1880; B. H. CLIFTON, Perry's Mills.
Bulloch.—J. F. BROWN, Ogeechee, October 16, 1880.
Effingham.—O. E. SMITH, Egypt, March 14, 1881.

COAST AND PINE-FLAT COUNTIES.

Chatham.—GEORGE P. HARRISON, Savannah, April 3, 1881.
Bryan.—A. G. SMITH, Malden Branch, March 28, 1881.
Liberty.—L. B. NORMAN, McIntosh, February 21, 1880; JAMES A. M. KING, Dorchester, January 24, 1880.
McIntosh.—WILLIAM C. WYLLY, Darien.
Clinch.—P. STOTESBURY, Stockton, January 30, 1880.
Echols.—JOHN HERNDON, Statenville, May 12, 1880.
Camden.—JOSEPH SHEPARD, Saint Mary's, January 3, 1880; E. A. McWHORTER, Saint Mary's, December 31, 1879..

ADDITIONAL NAMES.

<i>Appling</i> .—J. J. CARTER, Baxley.	<i>Glynn</i> .—R. M. TISON, Jamaica.
<i>Brooks</i> .—S. M. GRIFFIN, Quitman.	<i>Liberty</i> .—J. E. SHEPPARD, Hinesville.
<i>Burke</i> .—J. H. DANIEL, Millen.	<i>Lowndes</i> .—J. S. BARNETT, Valdosta.
<i>Clinch</i> .—J. TOMLINSON, Homerville.	<i>Morgan</i> .—N. E. RHODDY, Rutledge.
<i>Coweta</i> .—R. F. MILLER, Newnan.	<i>Putnam</i> .—S. C. PRUDDEN, Eatonton.
<i>Dade</i> .—A. W. SHERRILL, Rising Fawn.	<i>Rabun</i> .—F. A. BLECKLEY, Clayton.
<i>Dodge</i> .—J. M. SAPP, Eastman.	<i>Troup</i> .—J. F. JONES, Hogansville.
<i>Elbert</i> .—J. H. DUNCAN, Elberton.	<i>Washington</i> .—J. B. ROBERTS, Sandersville.
<i>Forsyth</i> .—F. H. NICHOLS, Cumming	

SUMMARY OF ANSWERS TO SCHEDULE QUESTIONS.

(The subject-matter embraced in this division of the report consists simply of a summary of the answers to schedule questions combined in such a manner as to avoid repetition and present the facts as concisely and clearly as possible. When of special interest, extracts are made from these answers, and the name of the county is added in parenthesis.

There are one hundred and twelve counties represented in these answers, nothing having been heard from parties in the other twenty-five to whom questions were sent.)

TILLAGE, IMPROVEMENT, ETC.

1. What is the usual depth of tillage (measured on land-side of furrow) and draft employed in breaking up ?

NORTHWEST GEORGIA: 5 to 6 inches in all counties except Gordon, which is 3 inches; 2 horses or mules generally, often with 1.

METAMORPHIC REGION: 2 inches in Madison and Greene, 3 inches in sixteen counties, 3½ inches in Douglas, Putnam, and Harris, 4 inches in seven, 5 inches in seven, 6 to 7 inches in eleven counties, and about 8 inches in Cobb and Taliaferro counties; generally with 1 and exceptionally with 2 horses or mules in thirty-seven counties, with 1 or 2 horses or mules in seven counties, and with 2 horses or mules in two counties (*Fannin* and *Haralson*).

CENTRAL COTTON BELT: 2 inches in three counties, 3 inches in nine counties, 4 inches in three counties, 5 inches in seven counties; 6 inches in Schley, and 10 inches on the bottom lands of Richmond; 2 horses in Richmond and Washington, and 1 horse or mule generally, and 2 exceptionally, in all other counties.

LONG-LEAF PINE AND COAST COUNTIES: 2 inches in Johnson and Pierce, 3 to 4 inches in thirteen counties, 5 to 6 inches in fifteen counties; usually with 1 horse or mule.

2. Is subsoiling practiced? If so, with what implements, and with what results?

NORTHWESTERN REGION: All of the counties except Dade and Catoosa, where the practice is said to be general, report very little subsoiling, though on the increase in some. The implements used are two-horse plows, long scooters, bull-tongue, colter or winged colter plows. The following extracts are given: The results of subsoiling are good. Besides increasing production, it enables crops better to endure excessive wet or dry seasons (*Murray* and *Walker*). Equal to an addition of 200 pounds of the best of fertilizers per acre (*Walker*). Does not seem to benefit the crops much, but makes after-cultivation easier and the soil less liable to wash (*Polk*).

METAMORPHIC REGION: In only fourteen of the counties is subsoiling practiced to any great extent. The implements used are the same as in the northwestern region, with the addition of the Avery, Brinley, diamond point, and square-pointed plows. The results are reported good in all counties except Hancock. The production is increased from 25 to 40 per cent. (*Warren* and *Hall*). Cultivation made easier (*Forsyth* and *Upson*). It so breaks the clay subsoil that the roots of cotton may go deeper and better endure drought, besides increasing

the production (*Newton*, *Troup*, *Gwinnett*, *McDuffie*, *Heard* and *Baldwin*).

CENTRAL COTTON BELT: Very little subsoiling is practiced in this region, in nine of the counties there being none at all. The implements are similar to those used in the metamorphic region. With four exceptions the results are good. "It does not pay" (*Twiggs* and *Laurens*). Not very favorable (*Schley*). Doubtful (*Sumter*). On stiff and hard-pan lands the production is increased 50 per cent. (*Glascock*). Good in dry seasons (*Marion*). Satisfactory where the subsoil is clayey, the yield being greatly increased (*Webster*). Good on red lands (*Randolph*).

LONG-LEAF PINE REGION AND COAST COUNTIES: It is done to some extent in but few of the counties, the implements being the Avery, Watt, Brinley, and other subsoil plows. If the subsoil is pebbly, the results are good; otherwise it is injurious (*Pierce*). The soil is injured by deep plowing (*Liberty*). The soil and subsoil are both sandy, and subsoiling is unnecessary (*Appling*).

3. Is fall plowing practiced, and with what results?

NORTHWEST GEORGIA: Yes; to various extents in all the counties except Gordon. It is not believed to be beneficial to cotton, and is not practiced for cotton in Murray. "A little; it is of little benefit to crops, and it makes rolling lands more liable to wash" (*Polk*). All others report results as very satisfactory, especially when vegetation is turned under. Nearly all the deep plowing is done in fall and winter (*Dade*). It makes after-cultivation much easier (*Walker*).

METAMORPHIC REGION: It is practiced but little generally, and not at all in the counties of Oglethorpe, Walton, Jasper, Heard, Baldwin, and Hancock. Results are reported good from all other counties, especially when vegetation is turned under. Stiff clayey lands are especially benefited by freezes and thaws after fall plowing (*Cherokee*, *Clark*, and *Muscogee*). It is profitable, but few can spare the time required for it (*Lincoln*). It would be generally practiced were not the labor all

engaged in picking cotton (*Columbia*, *Fayette*, *Gwinnett*, *Troup*, and *Upson*). It adds one-fourth to the yields (*Fulton*). It checks the progress of weeds by turning them under before their seeds ripen (*Newton* and *Monroe*). Results are unfavorable only where heavy rains wash the soil (*Morgan*). It is indispensable in preparing land for wheat or rye (*Troup*).

CENTRAL COTTON BELT AND LONG-LEAF PINE REGION: To but a small extent throughout these counties. Only when preparing to sow small grain (*Laurens*, *Webster*, and *Montgomery*). It is good for level clay lands (*Marion*).

COAST AND PINE FLATS: It is practiced in seven counties. Results are good if green weeds are turned under (*Chatham*). It checks damages by cut-worms and other pests (*Wayne*). The effect sometimes equals a dressing of manure (*Pierce*). Only in preparing the soil for oats (*Clinch*).

4. Is fallowing practiced? Is the land tilled while lying fallow, or only "turned out", and with what results in either case?

In thirty-two counties of the state it is not done at all, in twenty counties very generally, and in the remainder to some extent. Sometimes the land is tilled while lying fallow, and in nearly all cases, whether tilled or "turned out", a marked improvement is observed. "If the land lies idle one year after a crop of wheat or oats the cotton crop is increased fully 10 per cent." (*Warren*). In the exceptional cases of fallowing, land

has increased in production 25 per cent. in five years (*Hancock*). Merely "turning out" does not improve the land (*Webster*). Tillage while "lying out" consists in turning under the weeds in late summer or fall. In one instance the yield was increased from 5 to 42 bushels of corn, or from 200 to 2,000 pounds of seed-cotton per acre. The land had lain fallow nine years (*Pierce*).

5. Is rotation of crops practiced? If so, of how many years' course, in what order of crops, and with what results?

NORTHWEST GEORGIA: Yes; generally with cotton, corn, small cereals, sweet potatoes, and clover, in courses usually of two years, and in no special order of crops. In Murray the course is four years, the order being cotton, corn, oats, and wheat or rye. In other counties small cereals usually follow corn or cotton. The results are reported to be "favorable", except in Walker county, where it is claimed "rotation is fast wearing out our lands". "Even hillsides protected against washings would long maintain fertility if rotation were thus practiced in their cultivation" (*Bartow*). Everything does better, corn is sounder, and the soil does not wash so badly (*Polk*).

METAMORPHIC REGION: Yes; very generally in all the counties except Greene, Putnam, and Heard, where the correspondents report the system but little practiced. The usual course comprises three years, and mostly in the order of cotton, corn, and wheat or oats. In Forsyth, Cherokee, Madison, Wilkes, Walton, Cobb, Warren, and Troup cotton is reported as planted for several successive years before any other crop takes its place. In Warren and Jasper the land is allowed to rest every fourth year. In Haralson and Newton "four years of rotation" is practiced, oats following wheat. It is very generally stated that cotton is more productive when it is planted after a crop of wheat. The system of rotation is not regular, and seems to be resorted to as a relief to the soil after an exhaustive cotton crop; and in Oglethorpe county only on small farms. Good results in increased crops are universally reported. "Land is kept more free from weeds, and fertility is longer maintained" (*Fannin*, *Lincoln*, and *Putnam*). It is believed to be most profitable always to keep some of the land in cotton (*Cherokee* and *Newton*). Lands are improving in fertility at the rate of 10 per cent. every four years (*Fulton*). After the wheat harvest, pease are sown and the vines turned under in the fall, thus improving the lands by the addition of vegetable matter (*McDuffie*). If rotation were practiced, and the soil allowed a year's rest after the wheat crop, the cotton yield would be increased 10 per cent. (*Warren*). The washing of the soil is greatly diminished (*Upson*).

CENTRAL COTTON BELT: The counties of Richmond, Burke, Jefferson, Glascock, Washington, Laurens, Talbot, Taylor,

Marion, Quitman, Randolph, and Dougherty answer "yes", other counties "to a limited extent", and with no general system of rotation. A three years' course in rotation is very general throughout the region, and the several crops of corn, oats, potatoes, etc., are used. In Richmond and Stewart cotton is planted every second year, alternating with other crops. In Washington and Schley cotton is succeeded by corn, wheat, or oats, and then the land is allowed to rest for a year, while in other counties no rest is given. Laurens, Talbot, and Webster report the order to be corn, cotton, and small cereals, while Sumter claims that "no advantage is observed by planting cotton after corn". In Calhoun "wheat rusts so badly that it does not pay to sow it". Rotation enables the soil to maintain its productiveness longer (*Burke*). If the land is not manured the crops must be changed each year (*Glascock*). Land improved and production increased (*Talbot*). Where the change is from shallow to deep-rooted plants, or vice versa, the results are good (*Marion*). To produce wheat the land is manured as much as possible with compost and cotton-seed; as a result, double the usual yield is sometimes produced (*Webster*).

LONG-LEAF PINE AND WIRE-GRASS REGION: "Yes; to some extent," in all of the counties except Telfair and Wilcox, where either resting or planting in wheat is practiced every fourth year; and in Screven, Brooks, Dodge, and Coffee, where corn, sweet potatoes, and oats alternate with cotton. The usual course is three years, and in the order of cotton, corn, and oats or wheat in most of the counties. In Lowndes some of the farmers use fertilizers and never vary from continuous cotton planting. The results of rotation are always reported "excellent". Crops are increased 20 per cent. (*Screven*). The land improves and production increases (*Appling*, *Berrien*, and *Worth*).

COAST AND PINE-FLATS REGION: "Not generally" in Bryan and Wayne; "sometimes" in Liberty and Pierce, and "yes" in other counties, but with no regular system. Cotton, corn, and oats; cotton never follows pease or sweet potatoes, because it is then subject to rust if that disease prevails (*Liberty*). After a dressing of cow-pen manure, corn or sugar-cane is planted, then cotton or sweet potatoes.

6. What fertilizers or other direct means of improving the soil are used? Is green manuring practiced? What are the results in either case?

NORTHWEST GEORGIA: Fertilizers are scarcely used in the northern counties of Dade, Walker, and Catoosa, and then only with cotton crops. In other counties the use of commercial brands and composts of these with manure and cotton-seed is becoming very general. But little green manuring is practiced, though with cow-pease and clover the results are acknowledged to be good. Extracts: Commercial or other fertilizers are invariably used in the production of cotton; without them, not more than half the bolls would open. The slaty black-jack lands would produce almost nothing without fertilizers. For other crops than cotton barnyard manure is applied, and green manuring with cow-pease is practiced, always with good results (*Murray*). Production is increased one-sixth to one-fourth (*Dade*). Production increased 50 per cent. The first and second crops, after manuring, are improved (*2 Walker*). Will add, in a good season, 50 to 100 per cent. to the yield when properly applied (*Bartow*). Has stimulated and increased the production of cotton in this region; they increase the yield one-third (*Floyd*). Green manuring results in an increase of the following crop only (*Polk*).

METAMORPHIC REGION: Commercial fertilizers are used very generally in all of the counties, either alone or in composts, and an increase of production is reported varying from 35 to 75 per cent. Composts of barnyard manure, pine straw, leaves, and the like, with commercial fertilizers, are coming into general favor. In eighteen of the counties green manuring is reported to be in practice, while in all of the others very little is done. Cow-pease alone are turned under, except in the northern counties. The following results are reported: Green manuring improves succeeding crops (*Union*). The land improves more by lying fallow than by green manuring (*Elbert*). It is considered by some to be the best and most economical method of maintaining the fertility of the soil (*Wilkes*). It is for wheat the cheapest of all manures. Some planters sow cow-pease in the corn-field while the corn is being laid by, then plow them under while sowing wheat; the effect on the wheat is good (*Fulton*). Green manuring makes cultivation easy and improves the crops (*Newton*). It improves the land and crops for several years (*McDuffie*). It doubles the small cereal crops (*1 Warren*). Wonderful results are obtained by turning under one crop of cow-pease; it is equal to a dressing of bone fertilizer (*1 Putnam*). The results of the use of fertilizers are thus given: They make a climate (*Hall*). The best farmers use them and would not be without them (*Clarke*). Farmers are compelled to use them to make good yields (*2 Cobb*). The home-made manures are more durable in their effects than the others (*2 Douglas*). The composts are preferred (*2 Fulton*). They are used for the benefit of the crops, and not for any lasting addition to the soil (*1 De Kalb*). The use of commercial fertilizers is now declining, and farmers are beginning to use barnyard manure and composts made at home (*1 Newton*). They double the production of the unaided

soil (*2 Newton*). They increase the crops but not the net profits of farming (*Columbia*). Results are best from composts (*Fayette*). They make farmers of this region poorer each year (*1 Troup*).

CENTRAL COTTON BELT: Commercial fertilizers are used in all of the counties. Composts, made by combining other material with them, are also in general favor, some correspondents claiming a better yield. Green manuring is but seldom practiced, though the results are admitted to be good, especially to the succeeding crop. The following results are given regarding the use of fertilizers: Commercial fertilizers cause cotton to mature much earlier, and are especially advantageous on river lands. Green manuring is practiced with cow-pease; a few farmers sow grain without first turning under the pease, and the latter die and rot on the surface; the grain comes up well and the practice is growing in favor (*Richmond*). Fertility of the soil is maintained (*Jefferson*). Crops are improved 50 per cent. (*Glascock*). Crops are increased 25 per cent. (*Macon*). Results uncertain (*Chattahoochee*). Production increased 10 to 25 per cent. (*Stewart* and *1 Webster*). Increased production from 100 to 200 per cent. (*2 Webster*).

LONG-LEAF PINE AND WIRE-GRASS REGION: Commercial fertilizers and composts are very generally used in all of the counties of this region, and always with excellent results. Green manuring is not practiced in Dooly and Baker, and but seldom in other counties, except Brooks and Telfair, where it seems to be popular. The effects are always "excellent" where it is properly done. The following replies are given: The barnyard compost is always a success; the others are variable. In green manuring the native weeds have done better than pease (*Lowndes*). Some favorable and some unfavorable results have been obtained with fertilizers, and fine results from green manuring (*Brooks*). Crops are increased 50 to 75 per cent. by the use of fertilizers (*2 Thomas*). Results depend much on the seasons (*Decatur*). Fertilizers increase production 50 per cent.; green manuring, 20 per cent. (*2 Screven*). Green manuring is equal to the addition of 50 pounds of guano per acre (*Telfair*). Cow-pease are turned under in the fall for the benefit of the succeeding crop (*Berrien*).

COAST AND PINE FLAT REGION: Fertilizers are in general use, both commercial and home-made, the latter being preferred. Green manuring is practiced in all of the counties to some extent, except Bryan and Wayne. The following extracts are given: Composts and marsh muck are used; more and better lint is the result, and cotton-plants are more free from diseases. Muck is the most durable, its effects being observed for years. Green manuring is followed with only moderate results on the sandy lands (*2 Liberty*). Chiefly those found locally, such as pond muck and cotton-seed (*Wayne*). Composts pay from 50 to 100 per cent. (*Clinch*). Composts of manure and leaves and straw are used (*2 Camden*).

7. How is cotton-seed disposed of? If sold, on what terms and at what price?

Little, if any, cotton-seed leaves the state, but is very generally used for fertilizing purposes, both alone and in composts. It is also largely fed to stock, especially in the northern counties, where its value to the soil has not as yet been felt. Prices vary from 8 to 12 cents, and depend usually upon the market price of cotton, a pound of lint and a bushel of seed being considered of the same value. For planting purposes the price is sometimes as much as 25 cents (for sea island variety). The following extracts are given: The farmers here are beginning to realize the importance of utilizing their cotton-seed as a fertilizer, and but little is now allowed to be removed from the farm where it is produced. Intelligent and advanced farmers estimate cotton-seed to be cheaper, even at 20 cents per bushel, than any commercial fertilizer in the market. The most popular mode of using it is to sow broadcast, at the rate of about 25 or 30 bushels per acre, and plow

it in with wheat or oats. For growing corn or cotton it is composted with stable or barnyard manure and acid phosphate, and this is perhaps the most economical method of using cotton-seed (*Floyd*). Many owners now furnish tenants and share-laborers with cotton-seed as manure at the beginning of the season, and retain all that is produced in the fall. This method works well (*Polk*). The cheapest and easiest way of maintaining the fertility of the soil is by sowing cotton-seed with wheat or oats, then, without pasturing, turn under the green crop (*Newton*). It is generally thrown out of the gin-house to rot, and then hauled out as manure. A few planters apply it to corn land without rotting (*Baker*).

NEAREST OIL-MILL: The only oil-mills in the state are located in Savannah and in Augusta. There are others in Montgomery and Selma, Alabama, and in New Orleans.

8. Is cottonseed-cake used with you for feed? Is it used for manure, alone or composted, and for what crops?

It is not used at all in sixty-two counties of the state. In the others it is to some extent made to serve purposes both of feed and of manure. Two bushels of it mixed with one of corn-meal makes a good feed (*Webster*). Not unless cotton-seed is

scarce, then it is fed to cows after boiling and soaking. It is used for manure, either alone or mixed with muck, pine straw, fence-corner scrapings, and trash of all kinds, chiefly for growing corn (*Pierce*).

PLANTING AND CULTIVATION OF COTTON.

9. What preparation is usually given to cotton land before bedding up?

NORTHWEST GEORGIA: Fall plowing on stubble land in all of the counties except Gordon and Chattooga, where no preparation is given. Fallow land is turned over in the fall; in other cases the land is generally well broken before bedding up (*Murray*). Fall plowing to turn under stubble; otherwise spring plowing and harrowing (3 *Walker*). None; generally a furrow is opened, into which manure is distributed, and upon which the bed is formed just before planting (2 *Chattooga*). Fall plowing with 2 horses on stubble land, or spring plowing with 1 horse on clean land before bedding up (*Bartow*).

METAMORPHIC REGION: Fall plowing in Jackson and Wilkes (with 2-horse plows) and Coweta (on stubble land), and occasionally in other counties. Spring plowing usually in all of the counties, unless the previous crop was cotton, when in Hall, Lincoln, Clarke, Morgan, Greene, Columbia, Henry, Crawford, Talbot, Harris, Bibb, Hancock, and Monroe the land is simply bedded. Bedding up is preceded by deep plowing (*Warren*). The surface is cleared of rubbish; the row furrows are opened with shovel-plows, guano distributed in them at 200 pounds per acre, and this is bedded upon (*Troup*). Thorough plowing close and deep in the fall or spring (*Baldwin*). Broadcast plowing in winter chiefly (*Upson*). Knocking down stalks and plowing in spring (*Muscogee*). Farmers are too busy to plow in the fall (*Monroe*). First locate the beds by running off furrows 4 feet apart with a shovel-plow as deep as it can be done, and into these furrows another is put with a bull-tongue plow, and also on each side. Fertilizers are put into these rows, and the land bedded over them with a larger turn-plow (2 *Lincoln*).

CENTRAL COTTON BELT: No preparation is given in Richmond, Macon, Chattahoochee, Stewart, Sumter, Quitman, Clay, Early, and Dougherty (rarely), spring plowing usually in others. Land broken broadcast in winter (*Jefferson*). Five per cent. of the lands are plowed in the fall and 50 per cent. in spring, and 45 per cent. is bedded up without plowing (*Glascock*). Spring plowing if the preceding crop was corn or small grain; but if cotton, the old rows are simply barred off (*Twiggs*). Two furrows are thrown together with turning plows in the spring (*Laurens*). Some break the land before bedding up; others simply rebed the land of the previous season (*Taylor*). Chiefly deep, broadcast plowing in the spring (*Warren*). About April 1 the land is marked off in rows $2\frac{1}{2}$ or 3 feet apart, and guano drilled in at the rate of 100 to 200 pounds per acre (*Webster*).

LONG-LEAF PINE AND WIRE-GRASS REGION: No preparation in Baker, Mitchell, Colquitt, Brooks, Emanuel, Montgomery, Appling, and Berrien; spring plowing in most of the other counties. Fall plowing rarely; spring plowing sometimes, first broadcast, but generally ridging originally (*Screven*). Stubble land is plowed; where cotton is again planted the land is simply rebedded (*Lowndes*). Thorough plowing (*Dodge*). Breaking down the stalks and plowing (*Wilcox*).

COAST AND PINE-FLAT REGION: No preparation in Bryan, Wayne, Echols, and Camden. Fall plowing in Chatham, sometimes in Pierce, to turn under grasses and weeds. Breaking down weeds and spring plowing; fall plowing supposed to be one cause of rust (*Liberty*). Stalks pulled up and burned (*Wayne*). Stalks, if small, knocked down; if large, burned. Spring plowing diagonally (*Clinch*).

10. Do you plant in ridges, and how far apart?

Planting in ridges is the prevailing custom throughout the state, a few counties only reporting otherwise, or preferring simple drills. The distance allowed between the rows is from

30 to 48 inches, and varies with the character of land, 5 and 6 feet being given on bottom lands.

11. What is your usual planting time?

The earliest dates given are March 10 in Hart; March 15 in Richmond, Calhoun, Dougherty, Baker, Thomas, Colquitt, Pierce, Clinch, and Camden; April 1 in Union, Hall, Carroll, Newton, Troup, Meriwether, Burke, Wilkinson, Macon, Schley, Webster, Sumter, Quitman, Clay, Early, Liberty, Wayne, and Echols; April 5 in Bartow, Polk, Cherokee, Haralson, and

Upson; April 10 and 15 in all other counties of the State, except Dade, where planting is done from May 1 to May 20. June 10 is the latest limit of the planting season in McDuffie and Appling. In other counties from May 10 to May 15, except on the coast, where April 30 is the date given.

12. What variety of seed do you prefer?

The following varieties of short-staple cotton are given, and the number of times each is mentioned: Dixon's Cluster or Prolific, 61 times; Simpson, 12; Boyd's Prolific, 4; Peeler, 3; Petit Gulf, 3; Hurlong, 5; Cheatham, 3. Others are simply given as prolific or cluster varieties. The sea-island or black seed is used in the coast counties. Varieties from a more southern climate (*Banks*). Dixon's limby cotton does not shed as readily as the cluster variety in times of drought (*Rockdale*). The small seed va-

riety does not drop out as easily and yields as much per acre; the staple is equal to other varieties, and has a larger proportion of lint (*Webster*). Early varieties are sought for, for the purpose of having the crops matured before the appearance of the caterpillar (*Dougherty*). Green-seed or upland short-staple can be profitably planted on compact soils on the coast (*Liberty*). Sea-island produces better and seems best adapted to the coast region (*Camden*).

13. How much seed is used per acre?

The amounts vary greatly throughout the state, from one-half a bushel to 4 bushels. Except with choice seed, or with the use of "planters", no care is taken to prevent waste. The seed is

scattered thickly in the drills either by hand or through a tin funnel, and when up the plants are thinned out.

14. What implements do you use in planting?

Cottonseed-planters are used in Catoosa, Walker, Bartow, and Gordon of northwest Georgia, nineteen counties of the metamorphic region, nine of the central cotton belt, and ten of the long-leaf pine and coast counties. In all others the furrows

are opened with a small plow, and planting is done mostly by hand. The seed is then covered with a board, scraper, or harrow. "A plow to each trace laying off two rows at once, and a stout board with shafts covering two rows" (*Twiggs*).

15. Are "cottonseed-planters" used in your region? What opinion is held of their efficacy or convenience?

NORTHWEST GEORGIA: They are used and commended to some extent in all the counties except Dade, where but little cotton is planted. In Walker "they are almost indispensable" and "an advantage every way". In Chattooga and Bartow they are regarded as "efficient, convenient, and labor-saving machines; they make after-cultivation convenient, but they are best on smooth land". Some find fault with them in Polk, but they are approved generally by those who use them.

METAMORPHIC REGION: They are used to some extent in all the counties except Baldwin, Heard, Carroll, Haralson, Gwinnett, Walton, Union, and Habersham. Good ones are approved for light soils of smooth, stumpless, rockless, level lands. They are efficient only in skilled and careful hands, and make the rows more uniform and use less seed than in the old way. They are worthless in Carroll, where the land is rocky and rooty, and are being abandoned in Cherokee.

CENTRAL COTTON BELT: They are everywhere used, but to a very limited extent only. They are highly approved generally, but are good only on smooth, stumpless lands. In Webster

and Sumter the Dowlaw planter is considered a success, and is used by the majority. In Glascock and Laurens they are reported as seed- and labor-saving, efficient and convenient, making rows easy for plowing and hoeing.

LONG-LEAF PINE AND WIRE-GRASS REGION: They are used and generally approved in all the counties heard from except Telfair, Effingham, Appling, Emanuel, and Montgomery. In Lowndes they are not approved, because trees and stumps are too numerous for their successful use. They are used almost exclusively in Brooks, and are elsewhere considered indispensable, especially on large cotton farms in Worth. They make better stands in Baker; are always approved when once properly used in Johnson.

COAST AND PINE-FLAT REGION: They are considered indispensable in Chatham; in Liberty and Clinch a few in the hands of the white man reduce the labor of planting to one-sixth of that by hand. In Pierce "according to experience, the Dowlaw planter will not work in the light soils except sometimes when packed down by rains".

16. How long usually before the seed comes up?

NORTHWEST GEORGIA: From five to seven days in Walker and Gordon; from seven to ten in Murray, Floyd, and Polk; from ten to fifteen in Catoosa, Chattooga, and Bartow; fourteen to twenty-eight in Dade.

METAMORPHIC REGION: 1 Newton, two to three days, with swollen seed and good seasons; Columbia, Henry, and Carroll, three to six, conditions being good; thirty-one counties, seven to ten days; seventeen counties, ten to fifteen days; Jackson and Crawford, fifteen to twenty. The time depends upon the nature of the land (*Clarke*). Ten days if planted late, fourteen to twenty-one if planted early (*2 Cobb*). The later the planting the quicker it comes up (*Fullon*). Depends on the weather and condition of the soil (*Troup*).

CENTRAL COTTON BELT: In Laurens, eight days in warm and fourteen in cold, wet weather; Glascock, Talbot, and Sumter, from six to fifteen days; all other counties from four to ten days.

LONG-LEAF PINE AND WIRE-GRASS REGION: 2 Screven, three days; Montgomery, four to five days, conditions being fair; Emanuel, Brooks, 2 Thomas (if the soil is moist), Dodge, and Worth, from five to eight days; Appling, three to thirty days, depending upon whether planting is followed by rain or not; in other counties from eight to ten days.

COAST AND PINE-FLAT REGION: Early planting requires longer time to come up; Chatham, seven to fourteen days, according to weather; 1 Camden, fourteen to twenty, sometimes earlier; all other counties from seven to ten days.

17. At what stage of growth do you thin out your "stand", and how far apart?

When three or four weeks old in Polk, Catoosa, Jasper, Carroll, Putnam, Talbot, Quitman, Colquitt, Dodge, Echols, and Bryan; in other counties when 3 or 4 inches high, or when the plant has from three to five leaves. The plants are "chopped out" with hoes, leaving bunches at distances of usually the hoe's width. This in Hall, Cobb, Banks, Paulding, and Rockdale counties is from 6 to 8 inches; in Polk, Douglas, Spalding, Heard, Screven, Emanuel, Montgomery, Dodge,

Wilcox, Bullock, and Effingham, and coast counties, from 12 to 15 inches; in Crawford and other counties of the state, usually from 8 to 12 inches, but from 18 to 24 on rich lands. Sea-island cotton, 30 inches. "When rows are 3 feet apart the plants are thinned out to 8 inches; 3½-feet rows from 12 to 24 inches; 4-feet rows from 12 to 18 inches" (*Glascock*). A second "thinning out" removes the extra stalks from each hill, leaving two or three of the most promising.

18. Is your cotton liable to suffer from "sore-shin"?

"No", in Catoosa, Hall, Baldwin, Wilkinson, Emanuel, and Effingham; "Yes," in all other counties. But little in twenty-eight counties. "Only when the plant is wounded by instruments during cultivation" (*Bartow, Bibb, Muscogee, Burke,*

Baker, Lowndes, Montgomery, Appling, Coffee, and Liberty); if cultivated during cool and wet spring seasons (thirty-four counties). When not thinned out (*Newton and Bullock*). A disease natural to the plant (*Coweta*).

19. What after-cultivation do you give, and with what implements?

NORTHWEST GEORGIA: In Murray, Bartow, and Walker "throw the dirt from both sides of the row with a twisting shovel-plow, then to the row with sweeps; then use side harrows or hoes." "First, side with a scooter or bar off with a turning shovel plow and chop out the crop to bunches with the hoe; second, side with a scooter and scrape thin to a stand; continue to use the scooter and scrape, and hoe out the weeds and grass (*2 Polk*). "Harrowing chiefly, and hoeing to keep down grass (*Dade*). Other counties cultivate with scrapes, sweeps, and hoes; the methods in practice are various".

METAMORPHIC REGION: In Clarke, Gwinnett, and Cobb, first plow out the middles with the scooter, then cultivate with shovel-plows, and finally with the sweep; the crop is usually hoed three times. In Cherokee, Rockdale, Coweta, Troup, Upson, Carroll, and Meriwether, before thinning out, plow close to the row with long, narrow plows and break out the middles with shovel-plows; the third plowing is done with sweeps. In De Kalb, Fulton, Douglas, Fayette, Henry, Haralson, and Spalding, double-footed stock plows are used first, then scrapes and hoes. In Jackson, Lincoln, and Newton, with the harrow first, scrapes afterward; sometimes shovels and scooters are used. In Hancock, Crawford, Talbot, Putnam,

Columbia, Greene, Morgan, Paulding, Walton, Lincoln, and Hart, three or four very shallow plowings with the sweep and two or three hoeings. Other counties use the same implements.

CENTRAL COTTON BELT: In Laurens, Sumter, Randolph, Calhoun, and Clay, first side or bar off with a gopher plow, and after thinning out cultivate with shallow running plows or sweeps, hoeing in the meantime to keep grass down. In Burke, Richmond, Jefferson, Twiggs, Taylor, Marion, Schley, Chattahoochee, Webster, Quitman, Dougherty, and Early, shallow cultivation with sweeps and hoes. In Washington and Wilkinson, first hoeing, then shallow plowing repeated several times.

LONG-LEAF PINE AND WIRE-GRASS REGION: In Thomas "side with a small solid sweep or scooter, break out the middle with larger sweeps; three plowings". Other counties, "shallow cultivation with sweeps and hoes."

COAST AND PINE-FLAT REGION: In Bryan and Chatham "the crop is barred off, hoed and thinned, after which plows and cultivators are used". In Liberty "the sides and spaces between the plants are hoed and the sides and alleys are swept three or four times, giving a little earth each time". Other counties plow several times, and hoe as often.

20. What is the height usually attained by your cotton before blooming?

NORTHWEST GEORGIA: Murray: 24 inches. Catoosa: 24 to 30 inches. Dade: 24 to 36 inches. Walker: 12 to 18 inches. Chattooga: 18 to 24 inches. Bartow: 8 to 20 inches. Floyd: 16 to 24 inches. Polk: 5 to 15 inches. Gordon: 18 inches.

METAMORPHIC REGION: Hart and Union: 36 to 48 inches. Franklin, Heard, Madison, Meriwether, Putnam, and Upson: 10 to 18 inches. Banks, Cherokee, Elbert, Jackson, Cobb, Henry, Spalding, Crawford, and Muscogee: 18 to 36 inches. Clarke, Morgan, Columbia, McDuffie, Warren, Jasper, Baldwin, and Hancock: 4 to 10 inches. Troup: 10 to 36 inches. The remainder of the counties report from 12 to 24 inches.

CENTRAL COTTON BELT:—Richmond, Wilkinson, Talbot, Marion,

Randolph, and Early: 18 to 24 inches. Burke, Jefferson, Glascock, Washington, Taylor, Stewart, Quitman, Clay, Calhoun, and Dougherty: 12 to 24 inches. Twiggs, Laurens, Macon, Schley, Chattahoochee, Webster, and Sumter: 6 to 18 inches.

LONG-LEAF PINE AND WIRE-GRASS REGION: Dooly, Thomas, Telfair, and Coffee: 24 to 36 inches. Mitchell, Lowndes, Screven, Johnson, Emanuel, Montgomery, Dodge, Wilcox, Worth, Bulloch, and Effingham: 12 to 24 inches. Baker, Colquitt, Brooks, Decatur, Appling, and Berrien: 8 to 15 inches.

COAST AND PINE-FLAT REGION: Pierce: 36 to 48 inches. Liberty: 12 to 36 inches. Chatham, Wayne, Clinch, Echols, and Camden: 12 to 30 inches.

21. When do you usually see the first blooms?

NORTHWEST GEORGIA: Polk, Bartow, Chattooga, and Floyd: June 18 to June 30. Catoosa, Dade, and Gordon: July 1. Murray and Walker: July 1 to July 10.

METAMORPHIC REGION: McDuffie: As early as May 15 to May 20. Muscogee, Upson, Newton, and Crawford: June 1 to June 5. Lincoln, Morgan, Putnam, Jasper, Fayette, Baldwin, and Harris: June 10 to June 15. Union, Hart, Cherokee, Walton, Paulding, Fulton, De Kalb, Meriwether, Bibb, and Monroe: July 1 to July 4. June 15 to June 20 the blooms are white the first day and red the next, a fact observed by but few planters (*Troup*). The extreme limit given is August 1 to August 20 in Hall county. In the remainder of the counties the date varies from June 15 to June 30.

CENTRAL COTTON BELT: Webster: Late in May and early in June,

when land is fertilized. Burke, Chattahoochee, Sumter, Calhoun, Dougherty, Macon, Glascock, Jefferson, Marion, Quitman, and Early: May 30 to June 10. Richmond, Washington, Wilkinson, Twiggs, Laurens, Talbot, Taylor, Stewart, Randolph, and Clay: June 10 to June 30.

LIME-SINK AND WIRE-GRASS REGION: Lowndes and Appling: May 15 to May 31. Screven, Dooly, Mitchell, Brooks, Emanuel, Dodge, and Wilcox: June 1 to June 10. Colquitt, Baker, and Decatur: Late in May. Thomas, Johnson, Montgomery, Telfair, Worth, Berrien, Bulloch, and Effingham: June 10 to June 20. The latest is July, in Coffee county.

COAST AND PINE-FLAT REGION: Camden: Early in May. Liberty and Pierce: Late in May. Wayne: June 1. Clinch and Echols: Late in June.

22. When do the bolls first open?

NORTHWEST GEORGIA: In Walker as early as July 15. Murray, Catoosa, and Chattooga, August 15. Dade, Bartow, Floyd, and Polk, August 15 to August 31. Gordon, September 1.

METAMORPHIC REGION: In Coweta, fifty-one days from time of blooming. Troup, as early as July 1. Haralson, Carroll, Warren, Upson, and Muscogee, July 15 to August 1. Twenty counties report the date as varying from August 1 to August 15. In twenty-two counties the time varies from August 15 to September 1. The extreme limit, September 15, is reached in Hart county.

CENTRAL COTTON BELT: In Chattahoochee and Calhoun as early as June 30. Macon and Dougherty, July 15. Burke, Laurens, Taylor, Webster, Sumter, Quitman, and Randolph, July 15 to August 1. Richmond, Jefferson, Glascock, Washington, Wil-

kinson, Talbot, Schley, Clay, and Early, August 1 to August 15. Twiggs, Laurens, and Dooly about the 20th of August. The 21st of September is the extreme limit, and this is reported from Stewart county.

LONG-LEAF PINE AND WIRE-GRASS REGION: In Screven as early as July 15. Baker, forty days after the first blooms. Colquitt, Lowndes, Brooks, Thomas, Telfair, Appling, and Worth, July 15 to July 31. Mitchell, Decatur, Dodge, Wilcox, Bulloch, Coffee, and Berrien, August 1 to August 15. Dooly, Johnson, Emanuel, Effingham, and Montgomery, August 15 to August 31.

COAST AND PINE-FLAT REGION: In Chatham as early as July 25. Liberty, Wayne, and Camden, late in July or early in August. Pierce, Clinch, and Echols, August 1 to August 15.

23. When do you begin your first picking?

NORTHWEST GEORGIA: About August 25 in Murray; September 1 in Walker, Catoosa, and Gordon; September 10 in Chattooga, Bartow, Floyd, and Polk.

METAMORPHIC REGION: Picking begins as soon as laborers can find enough (40 to 50 pounds of seed-cotton per day) to make it profitable; the time varies with seasons and location. It may begin as early as July 20 in Troup. It begins about August 1 in Carroll, August 10 in Elbert, August 15 in Haralson and Harris, August 20 in six counties, August 25 in three counties, September 1 in eighteen counties, September 10 in five counties, September 15 in five counties, and September 20 in three counties.

CENTRAL COTTON BELT: August 1 in Taylor, Macon, and Colquitt; August 10 in Randolph; August 15 in five counties; August 20 in four counties; August 25 in three counties; September 1 in six counties; September 10 in Chattahoochee county.

LONG-LEAF PINE AND WIRE-GRASS REGION: About July 25 in Baker; August 1 in Screven, Colquitt, and Worth; August 15 in four counties; August 20 in three counties; September 1 in eleven counties.

COAST AND PINE-FLAT REGION: About August 15 in Liberty, Wayne, and Pierce; August 25 in Chatham and Bryan; September 1 in Camden; September 20 in Clinch, and October 1 in Echols.

24. How many pickings do you usually make, and when? Do you ordinarily pick all your cotton?

The greatest number of counties report three pickings, usually made as fast as the cotton has opened sufficiently. It often happens that as many as four and even five are made, especially in the middle counties of the state. Cotton is all picked in all of the counties of the state, but generally with hired help.

Two hands and one mule will make more than they can gather (*Putnam*). When there remains a little, very much scattered, it does not pay to pick it (*Hancock*). Excepting that which is damaged sometimes by frost (*Coffee*).

25. At what date does picking usually close?

About November 1 in Morgan, Telfair, Appling, Liberty, and Wayne; December 1 in nineteen counties of northwest and middle Georgia; in five counties of the central cotton belt, and ten

counties of the long-leaf pine and coast regions. In all other counties, from December 10 to 25. The time depends on the appearance of the first severe frost.

26. At what time do you expect the first "black frost"?

NORTHWEST GEORGIA: About October 15 in Murray, Catoosa, Walker, and Polk; October 20 in Dade and Bartow; November 1 in Floyd and Gordon, and November 15 in Chattooga county.

METAMORPHIC REGION: About October 1 in Union and Elbert; October 10 in Madison, Gwinnett, Morgan, and Upson; October 15 in eight counties; October 20 in twelve counties; October 25 in Cherokee, Columbia, Spalding, and Muscogee; November 1 in fourteen counties; November 5 in Warren; November 10 in Taliaferro; November 15 in Fayette and Troup, and November 20 in Monroe county.

CENTRAL COTTON BELT: About October 1 in Chattahoochee; October 10 in Washington, Stewart, and Webster; October 15 in

three counties; October 20 in five counties; November 1 in seven counties; November 15 in Early; November 20 in Dougherty, and December 20 in Randolph.

LONG-LEAF PINE AND WIRE-GRASS REGION: About October 15 in three counties; October 25 in three counties; November 1 in Appling; November 15 in nine counties; November 20 in five counties, and December 1 in Thomas county.

COAST AND PINE-FLAT REGION: About November 1 in Echols; November 15 in Bryan, Wayne, and Clinch; December 1 in Pierce; December 10 in Liberty; December 20 in Chatham; usually none in Camden; none up to January 30, in the winter of 1879-'80, in Liberty and Clinch counties.

27. Do you pen your seed-cotton in the field or gin as the picking progresses?

The greatest number of counties report "ginning as picking progresses", or as fast as "a sufficient amount has been picked to make a bale or two of lint". In seventeen counties many house the seed-cotton either in the field or in the gin-house, and in some instances it is guarded until ready for the gin. In Webster tenants pen in the field, while owners house the

cotton securely. In Lincoln and Warren "it is locked up and ginned during wet days or when it is desired to sell a quantity". Comparatively few farmers own gins, and in many of the counties "public gins" do the work for large regions. In the coast counties much of the cotton is sold in the seed.

GINNING, BALING, AND SHIPPING.

28. What gin do you use? How many saws? What motive power? If mules and horses, what mechanical "power" arrangement do you prefer? How much clean lint do you make in a day's run?

Brown's gin is mentioned in thirty-one counties, Winship's in twenty-three, Gullett's in eighteen, Griswold's in fifteen, Pratt's and Massey's each in ten, Taylor's in five, Hall's in four, Hammock's in three; Centennial, Findley's, and Emery's condenser, two each; Sawyer's, Carver's, Orr & Hampton's, Whitney's, Van Winkle, Niblett's, Goodrich, and Webb, one each. McCarthy's (roller gin for sea-island cotton) in four counties. The number of saws are usually from forty to sixty; sometimes, though rarely, as many as one hundred and twenty. The motive power is either mules and horses or steam-engines; sometimes water-power is employed, especially in the metamorphic region, where the streams are capable of furnishing it to an almost unlimited extent. When mules or horses are used, the power arrangement is usually the "old style shaft and driving-wheel, trundle on horizontal shaft".

The number of pounds of lint ginned per day depends, of course, upon the number of saws and the power by which they are run. "With steam the general estimate is 10 pounds of lint per hour for every ten saws, while with horses or mules it is about one-half that amount".

The following summary from the reports from the different counties gives the ginning capacity of each gin with reference to number of saws and motive power; the time is ten hours:

BROWN'S GIN:	Pounds.
120 saws, by steam-power	5,000
80 saws, by water-power	3,750
60 saws, by steam	5,000
60 saws, by water	3,000
50 saws, by steam	3,000
50 saws, by water	2,000
50 saws, by mules	1,600
40 saws, by steam	1,800
WINSHIP'S GIN:	
60 saws, by water	4,000
50 saws, by steam	4,500
40 or 45 saws, by steam	2,000
40 or 45 saws, by mules	1,100
GULLETT'S GIN:	
80 saws, by steam	5,000
45 or 50 saws, by steam	3,000
45 or 50 saws, by 4 mules	1,000
40 saws, by water	2,000

GRISWOLD'S GIN:	Pounds.
50 saws, by steam	2,500
50 saws, by 4 mules	1,000
40 saws, by mules	1,000
PRATT'S GIN:	
60 saws, by steam	4,500
60 saws, by 6 mules	3,000
40 saws, by mules	1,000
MASSEY'S GIN:	
50 saws, by steam	3,000
50 saws, by mules	1,500
30 saws, by steam	2,000
TAYLOR'S GIN:	
50 saws, by mules	1,250
45 saws, by mules	1,000
40 saws, by water	1,800
HALL'S GIN:	
40 saws, by water-power	2,000
HAMMOCK'S GIN:	
45 saws, by mules	1,000 to 2,000
CENTENNIAL GIN:	
60 saws, by steam	3,500
45 saws, by mules	1,000 to 1,200
FINDLEY'S GIN:	
60 saws, by steam	4,000
40 saws, by steam	2,000
40 saws, by mules	1,000
EMERY'S CONDENSER GIN:	
60 saws, by steam	3,000
CARVER'S GIN:	
60 saws, by steam	5,000
ORR & HAMPTON'S GIN:	
50 saws, by mules	1,250 to 1,500
WHITNEY'S GIN:	
42 saws, by steam	2,000
VAN WINKLE GIN:	
50 saws, by steam	3,000
WEBB'S GIN:	
45 saws, by water	1,200 to 2,000
The capacity of other gins were not given.	435

"Before the civil war every considerable planter kept a gin of his own. Many of these gins have now fallen into disuse, and much of the ginning is done by those who make a business of it, and whose gins are run by water- or by steam-power. Farmers who care little to encourage labor (under the share system) generally have their cotton ginned by these public gins. A steam-engine now only costs about double the price of the old-fashioned 'running gear'; then, taking into account the speed with which cotton is ginned by steam, steam is the cheaper. Some still gin their crops with the old mule-power, notwithstanding a half dozen engines are heard around them every day, ginning the crops of the neighborhood. These steam-gins separate 2,000 to 6,000 pounds of lint per day, and charge one-twentieth of seed-cotton for ginning. It

is almost or quite as much work for the men and teams to haul the cotton to these gins and the seed back as it would be to gin at home" (2 Polk).

Steam-gins are used by the wealthier farmers, to whom others of the neighborhood haul their seed-cotton to be ginned. The usual charges are 50 cents per 100 pounds of lint, ginned and packed, or the seed from that lint. This practice, both in this and surrounding counties, was made necessary by the great increase of small farms (Clarke). There are in this county about 30 public gins, run by steam- and horse-power, which gin at least one-half the cotton of the county at 40 cents per 100 pounds of lint ginned and packed. Steam-, water-, and horse-powers are used in all of the counties (Washington).

29. How much seed-cotton on an average is required for a 475-pound bale of lint?

The amount varies from 1,425 to 1,780 pounds. This difference is due largely to the fact that the time that elapses between picking and ginning is not the same. When ginned immediately the seeds are green and heavy, and more is necessarily required for the same amount of lint than if allowed to dry. Other causes also, such as variety of seed and the character of

the land, have their effect upon the weight. The rule generally is that "seed-cotton will third itself in lint". Forty-one counties report 1,425 pounds; twenty counties, 1,485; fifteen counties, 1,545; the highest, 1,900 pounds, is reported from Randolph.

30. What press do you use for baling, and what is its capacity?

There are presses of thirty-seven different patents or names mentioned in the county reports, while in most of the counties the old-style wooden screw is still in use to some extent. The following is a list of the patented presses and the capacity of each, as reported:

Scofield's in twenty counties; with 4 men and 1 horse, or 7 men, it will press 15 bales per day; with 2 boys, 8 bales; with 6 men and 2 horses, 20 bales of 600 pounds each.

Brooks' in eighteen counties; with 3 men and 1 horse, 12 to 20 bales. Winship's in eleven counties; with 2 men and water-power, 20 bales. Smith's in seven counties; with 4 men, 15 bales.

Findley's in seven counties; by water-power, 12 to 15 bales, or with 4 men, 20 bales.

Allum's in seven counties; with 4 men and 2 mules, 20 bales.

Wright's in seven counties; Utley's, Cole's, and Atkinson's in four each; Van Winkle's and Nesbit's in three each; Stokes' and Bullock's in two each; and the following in one county each: Dixie, Ingersoll, Grange, Southern Standard, Pendleton, Boardman, Wilson, Taylor, Athens, Poor Man's, Griffin, Craig, Hines, Packard, Neal, Eclipse, Helm's, Bankman's, Templeton, Atkinson, Roundtree, Bloodworth, and Gleason. All have about the same capacity.

31. Do you use rope or iron ties for baling; if the latter, what fastening do you prefer?

Iron ties are used exclusively everywhere throughout the state except where sea-island cotton is produced, which is simply put in bags. The "arrow fastening" is generally preferred, though there are various other fastenings in use in all of the

counties, and fifteen correspondents claim that "all are equally good". Correspondents from nine counties prefer the hook variety. The Dunn, in Glascock; Harper, in Putnam; and Hayden, in Chattooga.

32. What kind of bagging is used in your region?

Gunny is reported by 39 correspondents, hemp by 32, jute by 20, "all kinds" by 6, Anchor brands by 5, Dixie brand by 4, the best obtainable by 4, common bagging by 2, manila by 2, Greenleaf bagging by 1, and New Orleans bagging by 1.

Bagging of 2 or 2½ pounds' weight by seven counties. The best and heaviest seem to be preferred, as necessary to endure the rough handling with hooks to which bales are subjected during transportation.

33. What weight do you aim to give your bales? Have transportation companies imposed any conditions in this respect?

Five hundred and fifty pounds is reported from Bibb. Three correspondents report 525 pounds; seventy-six report 500 pounds; sixteen report 475 pounds; thirty-three report 450 pounds; two report 400 pounds. Sea-island lint is put up in bags of 250 to 350 pounds each in Camden and other coast counties. Twenty-two counties report that "no conditions are imposed except by cotton buyers. These fix the minimum weight per bale and deduct \$1 to \$2 from the market value of each bale below". Two report the minimum to be 250 pounds; twelve report 300 pounds; one reports 310 pounds; four report 350

pounds, and five report 400 pounds. "Competition of buyers has abolished this condition" (Polk). "Railroad companies charge per 100 pounds for carrying; river carriers charge per bale regardless of weight. In either case, if cotton is lost in transit or by fire at destination or elsewhere, it is paid for by carriers and insurance companies at the rate of 450 pounds per bale" (Laurens). Since all expenses are per bale, the aggregate is comparatively less on heavy than on light bales (Clinch).

DISEASES, INSECT ENEMIES, ETC.

34. By what accidents of weather, diseases, or insect pests is your cotton crop most liable to be injured? At what dates do these several pests or diseases usually make their appearance, and to what cause is the trouble attributed by your farmers?

NORTHWEST GEORGIA: The caterpillar and boll-worm are reported from all the counties except Murray and Catoosa, appearing, however, rarely in Walker, Dade, Chattooga, Floyd and Polk. The time of their coming varies from August to October. The army-worm is reported from Walker. It sometimes injures the crops, but when it appears late in the season it is

by some believed to benefit the crop by hastening the opening of the bolls. Aphides (plant lice) and fleas, in May and June, are of common occurrence in Walker and Bartow, and are attributed to cool nights in the spring. The cut-worm is reported from Polk, appearing in May and June. Rust, shedding, and rot of bolls in summer and early fall are prevalent in all the

counties excepting Murray and Catoosa, owing to too much rain, very dry seasons following excessively wet ones, and sudden changes of weather. Rust occurs in Polk, generally on fresh or very old lands, and is attributed to a very small louse or mite.

METAMORPHIC REGION: The caterpillar and boll-worm appear in the following counties: Habersham, Cherokee, Oglethorpe, Wilkes, Douglas, Newton, Taliaferro, McDuffie, Jasper, Coweta, Heard, Troup, Upson, Crawford, and Muscogee. The caterpillar alone is reported from Baldwin, Harris, and Hancock, and appears to some extent in Forsyth. The boll-worm alone in Clarke, Walton, Fulton, De Kalb, Columbia, and in Putnam to a slight extent. Aphides are of common occurrence in Cherokee, Lincoln, Douglas, and Fulton; none reported in the remainder of the counties. The cut-worm appears only in Warren and Crawford as far as reported. No pests of any kind are reported in Hall county. Rust and shedding are of common occurrence in almost every county of this region, caused by extreme states of the weather, either wet or dry, and by warm dry seasons following very wet ones.

CENTRAL COTTON BELT: The caterpillar is reported in all of the counties except Richmond, Wilkinson, Johnson, and Emanuel, appearing usually in August or September; the boll-worm in all of the counties except Richmond, Wilkinson, Twiggs, Laurens, Macon, and Randolph. The cut-worm appears in only Richmond and Burke as far as reported, and aphides in Laurens, Schley, Chattahoochee, and Quitman. Other diseases are prevalent in all of the counties, and are attributed generally to extreme conditions of weather; rot of

bolts usually to "wet weather, when the foliage of the plant is dense".

LONG-LEAF PINE AND COAST COUNTIES: The caterpillar is reported from all of the counties except Johnson and Emanuel, appearing, however, rarely in Screven and Clinch. It usually comes in August or September; in Coffee county "so late as to do but little damage". The boll-worm is reported by but 15 counties, and in Dodge "is not known at all". Shedding and rust, as well as rot of bolts, are common to nearly all of the counties, and are attributed mostly to extremes of weather or to sudden changes from one extreme to another. "Rot of bolts appears in wet weather only when the plants stand too thick in the row. When the root strikes the poorer subsoil and the side roots have exhausted the surface soil rust is apt to appear, and may be induced either by drought or by other cause. An abundant supply of manure to the surface and subsoil will prevent rust, but the remedy is impracticable on the large scale" (1 *Screven*). "Twelve or fifteen years ago the caterpillar appeared in the cotton-fields only once in two, three, or sometimes four years; but later its ravages have increased, and it seems to be a fixture, coming now regularly each year and apparently defying all efforts to check it. The farmers regard it with dread, for when it makes its appearance earlier than usual, as is sometimes the case, it does much damage, especially to late cotton. As a rule, the farmers try to push their cotton by manuring and using early varieties of seed, that the crop may mature as far as possible before the caterpillar arrives" (*Decatur*).

35. What efforts have been made to obviate the trouble, and with what success?

No special efforts are reported in the greatest number of counties. The following have been made with some degree of success: "Deep plowing" in Chattooga, Polk, Putnam, Newton, Baldwin, Gwinnett, Dooly, Worth, and Berrien against shedding, rust, etc.; continued surface cultivation in Lincoln and Baker; fertilizers and drainage to prevent rust in McDuffie, Monroe, Taylor, Early, Talbot, and Marion; "the use of wood ashes" (2 *Lincoln* and *Paulding*); "rotation of crops" (1 *Douglas*); the application of salt for rust (*Carroll* and 1 *Putnam*); but this meets with poor success in Wilkinson, Webster, and Sumter.

For the destruction of insects and moths lamp- and water-traps have been used in Webster and Thomas, but with uncertain success. "A water-furrow is left between rows after the final cultivation. The soil is not stirred when wet, otherwise rust and blight surely follow. This is sometimes apparent when parts of the same field are treated in these two different ways" (2 *Liberty*). "The prohibition of the indiscriminate slaughter of insectivorous birds is of more economic importance and practical utility than all the chemical insect poisons combined" (1 *Webster*).

36. Is rust or blight prevalent chiefly on heavy or ill-drained soils? Do they prevail chiefly in wet or dry, cool or hot seasons, and on which soil described by you?

On both heavy and ill-drained soils, in all of the counties throughout the state. That they prevail chiefly in extreme conditions of the weather is reported by six counties; in wet seasons, forty-five counties; dry seasons, seven counties; cool weather, eighteen counties; hot weather, twenty counties, where hot and dry follows excessive wet seasons. On sandy lands, twenty-four counties of the northwest and metamorphic regions, and nearly all of those of southern Georgia. Other counties report the prevalence of these diseases on all lands. "Those spots that suffer most from rust in wet periods are the same that suffered most from drought in the period preceding" (1 *Polk*). "Rust is rarely seen on red clay lands" (*Lincoln*,

Troup, and *McDuffie*). "Most common when outcroppings of impervious clays occur" (*Monroe*). "In the flats of pine woods and sweet-gum bottoms" (*Warren*). "On the small black prairies" (*Twiggs*). "Old lands seem to suffer most" (*Richmond*, *Marion*, *Webster*, *Dooly*, and *Clinch*). "The black or humid rust prevails chiefly in the flats and pipe-clay lands. Manure is put deep in furrows on such lands, and when the plant roots become submerged during rains the bolts turn black and drop off. Other rusts appear on sandy and old soils" (*Richmond*). "Red rust is most common in dry weather; black rust, the worst of the two, in wet seasons" (*Loundes*).

37. Is Paris green used as a remedy against the caterpillar? If so, how, and with what effect?

It has been used only in the counties of McDuffie, Putnam, Harris, Talbot, Muscogee, Burke, Schley, Stewart, Webster, Quitman, Calhoun, Dougherty, Baker, Mitchell, Brooks, Thomas, Screven, Dodge, Worth, and Effingham, and, owing to its expense, the danger attending it to men and animals, as well as to its but partial success in destroying the caterpillar, it has been very generally abandoned. It is usually applied to the plant in solution by means of a sprinkling pot. "In the form of powder, mixed with flour and resin, with fair success; but it is too expensive for most planters. A less efficacious but cheaper poison than Paris green or London purple

is a solution of one pound of arsenic in a barrel of water. This is applied by sprinkling pots, or, better, by 'fountain pumps.' This is the cheapest and most easily applied poison for the purpose, and it destroys the caterpillar for ten to fifteen days, or until the poison disappears from the plant, when the application must be renewed if the pest continues. Planters who have used poisons with care and judgment are pleased with the results. Many try them when too late, or they leave the application to careless and unintelligent laborers, and the results are not good" (*Dougherty*).

COTTON PRODUCTION IN GEORGIA.

LABOR AND SYSTEM OF FARMING.

38. What is the average size of farms?

From 150 to 200 acres (or sometimes 300) in northwest Georgia; from 20 to 100 acres in the Blue Ridge region; from 50 to 200 acres in the northern counties, and from 200 to 500 acres in the southern counties of middle Georgia, and sometimes as much

as from 1,000 to 2,000 in Cherokee, McDuffie, and Troup; from 50 to 150 or sometimes 200 acres in the central cotton belt and the long-leaf pine region, and from 50 to 100 acres in the coast counties.

39. Is the prevalent practice "mixed farming" or planting? Are supplies raised at home or imported? If the latter, where from? Is the tendency toward raising home supplies increasing or decreasing?

"Planting" is the prevalent practice in Morgan, Greene, Bibb, Muscogee, Hancock, Quitman, and Decatur counties. In all the rest of the state "mixed farming" prevails. The counties which raise their own supplies are Murray, Catoosa, Dade, Gordon, Fannin, Union, Hart, Marion, Dooly, Mitchell, Colquitt, Brooks, Dodge, Telfair, Coffee, Berrien, Bulloch, Tatnall, Effingham, Pierce, and Echols. In 75 counties most of the supplies are produced at home, some of the bacon and flour being brought from the northwestern states. Other

counties obtain the greater part of corn, flour, and meat from Saint Louis, Chicago, Louisville, and Cincinnati. The tendency toward home supplies is decreasing in Walker ("because the cotton area is increasing"), Chattooga, Gordon, Forsyth, Haralson, Greene, Troup, and Effingham; is unvarying in Bartow, Polk, Cherokee, Elbert, Cobb, De Kalb, Coweta, Jefferson, Glascock, and Emanuel, and is increasing in all other counties. "Raising of home supplies varies inversely as the price of cotton" (Laurens).

40. Who are your laborers chiefly? How and when are their wages payable?

NORTHWEST GEORGIA: Native whites and negroes. Wages are 50 cents per day, \$8 to \$10 per month with board, or \$12 to \$14 without board, or \$100 to \$150 per year, payable, according to contract, as they require it, or at the end of the season.

METAMORPHIC REGION: In Fannin, Europeans, chiefly English and Irish; towns, 93 per cent. white. Jackson, 1 per cent. Chinese. Mostly whites in Union, Habersham, Hart, Banks, Hall, Forsyth, Gwinnett, Cobb, Paulding, Haralson, and Heard; whites and negroes in Madison, Carroll, Rockdale, Taliaferro, Spalding, and Meriwether; mostly negroes in the other thirty-three counties. In eighteen counties wages paid are from \$75 to \$90 per year, or \$6 to \$8 per month. In other counties the average is about \$100 per year, or \$8 to \$10 per month, in all cases with board. In Fulton \$100 is paid with board, or \$130 to \$140 without board. Day laborers receive

from 40 to 75 cents per day, and are paid weekly or daily, the latter during the busy season of the year. Payments are made according to contract, or when the laborer needs the money, final settlements being made at the end of the year when crops are sold.

CENTRAL COTTON BELT—LONG-LEAF PINE AND COAST REGIONS.—

Except in Glascock, Colquitt, and Berrien counties the laborers are chiefly negroes. The men receive from \$5 to \$10 per month or \$60 to \$100 per year; the women from \$4 to \$6 per month or \$40 to \$60 per year. Day laborers are paid usually 50 cents per day. Board is also furnished with the above wages, which are paid, according to contract, usually at the end of the year. "They have the free use of land, team, and implements on Saturday (a day they claim and will have) for raising crops of their own" (Twiggs).

41. Are cotton farms worked on shares, and on what terms? Are supplies furnished by the owners?

The share system is practiced in all of the counties of the state to a greater or less extent, except in Dade and Union on the north, and Colquitt, Berrien, Chatham, Bryan, Wayne, and Pierce on the south.

The owner receives one-fourth the cotton and one-third of the corn for use of land alone, or one-half the crop for the use of land, implements, and teams, the laborer boarding himself. If board is also furnished, the owner receives two-thirds of the crop. In northwest Georgia, if the laborer leases new land, he takes off all timber of less than one foot diameter, incloses the land with a good ten-rail fence, and

has the use of it for three years, or, if bottom land, for four years. In some counties of middle Georgia the cost of fertilizers, ginning, and baling is shared equally. In some cases tenants pay two 500-pound bales, delivered in Augusta, for the use of as much land as they can cultivate with one horse or mule; such tenants have their own plow teams, cattle, and hogs, sell their own produce, do their own trading, and disburse their own funds (Columbia). Labor is considered equivalent to one-third of the crop, land to one-third, and the stock, feed, and implements to one-third (Appling).

42. Does your system of labor give satisfaction? How does it affect the staple, and does the soil deteriorate or improve under it?

NORTHWEST GEORGIA: The system of shares very generally gives satisfaction in all of the counties, except Gordon, where "laborers are not reliable". The staple is not materially affected, except in Chattooga, Walker, and Bartow, where it is claimed to be "freer from trash than when picked by hired labor". In all but Murray, Catoosa, and Bartow, the share system is said to injure the soil.

METAMORPHIC REGION: Not entire satisfaction in Fannin, Franklin, Madison, Oglethorpe, Wilkes, Lincoln, Fulton, Morgan, Taliaferro, Columbia, Putnam, Jasper, Spalding, Coweta, Heard, Upson, Talbot, Crawford, Bibb, Muscogee, and Hancock. "To the tenant and not to the owner" (Gwinnett, Haralson, Cobb, and Warren). Very general satisfaction in other counties. "It is not as satisfactory to the owner as the wages and renting system" (Lincoln, Haralson, and Upson). It is generally thought that the staple is not affected, except in Wilkes, Lincoln, Walton, Troup, Baldwin, Talbot, Crawford, and Hancock, where it is claimed that the cotton is trashy because of careless picking. Some counties claim a better grade than where picked by hired labor. "The quality is ob-

served to depend to some extent upon the intelligence of the labor by which it is produced" (Columbia). The soil improves under the system (Hart, 2 Cherokee, Oglethorpe, Gwinnett, 1 Warren, and Fayette). In all other counties it is said to deteriorate. "The plan of dividing crops under the share system is an equitable one, and if it were properly carried out there could be no cause for complaint; but the owner, in nine cases out of ten, has not only to furnish his farm, but to supply all the needs of the tenant, without having any control over the time or acts of the tenant, who is often seen idling and loitering when his crop requires his immediate attention. Tenants owe the owners for provisions, clothing, tobacco, etc., and in many cases they are indifferent as to whether they produce enough to pay the owners these advances made during the season. Thus the landlords annually lose largely by this system of shares, simply because they have all the risks and no corresponding control" (DeKalb).

CENTRAL COTTON BELT: Yes; in all counties except Burke, Glascock, Laurens, Schley, Stewart, Webster, Clay, and Calhoun. A few report an inferior staple because of trash and careless

gathering. "Under the share or rent system the quality of the staple is better, because there are more of the croppers and renters (their families) to pick a given amount of cotton, which is therefore gathered sooner than under the wages system (*Twiggs*). The soil is said to deteriorate in all of the counties, except Jefferson and Early. The deterioration of the soil is almost entirely attributable to the carelessness or mismanagement of owners. The laborer is generally ready to follow the suggestions and directions of the owner, and not one has yet been found (by the writer) who refused to aid in necessary repairs or invest in commercial fertilizers when requested to do so. The result is, that land cultivated under the share or tenant system has continued to improve in value and fertility equal to that cultivated under the wage system (*1 Webster*).

LONG-LEAF PINE AND WIRE-GRASS REGION: Yes; except in Screven and Baker, where the satisfaction is but partial. In Dooly, Colquitt, and Berrien the wages system generally prevails and gives satisfaction; "cotton is picked more promptly, and is therefore better" (*Dooly*). The staple is thought to be unaffected by the share system except in Baker and Worth, where trash and stains are complained of, and "by not being gathered in time" (*2 Screven*). "It is not always as good as under the share system" (*Brooks*). "The soil is not affected, and improves if properly managed" (*Johnson, Emanuel, Montgomery, Telfair, Wilcox, Effingham*). In other counties it deteriorates, except where the wage system is adopted, which

places the land under the supervision of the owner. "The tenant system of renting to negroes is quite popular; usually the landlord receives a 500-pound bale of middling lint cotton for the use of a one-mule farm, or 30 to 40 acres, the tenant furnishing all requisites, and keeping fences, etc., in repair. Sometimes the tenant rents a mule from the owner for from \$25 to \$30 per year; most of them own each a mule. Most of these tenants make money, especially where the owner lives on the plantations with them and gives them a general supervision. Those do best who do not aspire to more than a two-mule farm. Many instances are known where negroes have kept enlarging the scale of their farming until they owned a lot of mules and employed a lot of hands, and then failed; they cannot manage many of their own kind. Some negroes in this locality have bought and paid for small farms, and are almost invariably doing well; they are of the better class, and have their wives and children to help them. There is no existing local prejudice against such negroes" (*Dougherty*).

COAST AND PINE-FLAT REGION: Yes; except in Liberty and Camden. The staple is not affected, but the soil deteriorates, except in Bryan and Clinch, where "all the lands improve when cultivated in cotton". Some farmers are only satisfied with the plan of hiring and controlling the labor, the negro being too easily satisfied with a little of a poor quality to strive to raise much of a good quality. The share and renting systems are ruinous to the soil (*2 Liberty*).

43. Which system (wage or share) is the better for the laborer, and why?

In answer to this question sixty-one counties report in favor of the wage and thirty-two of the share system. The reasons are very numerous and varied.

FOR WAGES: "He is sure of his earnings, and takes no risk of crop failures when he receives wages" (twenty-two counties). Laborers usually are too poor to provide implements (ten counties). He is better and more surely paid, knows what he is to receive, and avoids trouble and division of crops (other counties). He is altogether too improvident and deficient in

business and managing capabilities to succeed under the share system. Morally, the share system has greatly injured the negro race in the southern states (*Richmond, Washington, and other counties*).

FOR SHARE SYSTEM: Because shares exceed wages if the laborer is industrious; the laborer can employ his family profitably, feels more free and independent, and takes a greater interest in his crops (many counties).

44. What is the condition of the laborer?

NORTHWEST GEORGIA: "Generally poor and dependent, though comfortable", is reported by three counties. "As good as could be expected; they save none of their earnings" (*Barlow*). Good in five counties. "They have plenty, and are content; the average laborer of the county makes a support by working half his time" (*Walker*). "Before the war the poorer whites owned and occupied small, poor places and produced nearly all they used of both food and clothing; but they produced very little cotton. Negro slaves cultivated all of the best and largest plantations. Now the poorer whites have abandoned their poor farms and work for shares on the larger and better farms, under the general direction of land owners. As cotton is the profitable crop, these poor people produce cotton almost exclusively, and with it buy everything they need, except bread, and some even buy that. Families who in ante-bellum days only produced from 2 to 3 bales of cotton now produce from 5 to 20. Many of the negroes are still sticking to the large farms, while others, from their own choice, are going to the poorer places, where they can never thrive. As producers of cotton whites can be just as efficient as negroes in this part of the country. They need only to work under the direction of the most intelligent farmers, who, as a rule, own most of the good lands. If Polk county were deprived of every negro in it there would after a few years be no change either in the quality or quantity of its products; whites would do all the negroes are now doing. All who will work can do well. The average share laborer works but little over half the year and yet lives well" (*2 Polk*).

METAMORPHIC REGION: In eleven counties it is said to be poor and the laborer largely dependent upon his employer. "They are

indolent and poor" (*Walton*). "Sometimes without bread for their families" (*Greene*). In a destitute condition (*1 Jasper*). Many are in a worse condition than they were during slavery (*1 Troup*). Generally bad (*Hancock*). In thirty-seven other counties the laborer is said to be in comfortable circumstances, especially when industrious. "Making money and rising" (*Jackson*). Thrifty and happy (*Elbert*). "Well fed and clothed, but have little else" (*1 Lincoln*). Improving each year (*Fulton*). Generally out of debt (*Rockdale*). The old are industrious, the young are indolent (*McDuffie*).

CENTRAL COTTON BELT: "Generally poor and dependent" is reported from 6 counties. "They live up to each day's income" (*Jefferson and Sumter*). It is not so good as heretofore; not so good as would be expected from their experience. They are poor and do not care to improve (*Stewart*). Eleven counties report their condition *usually good and very good*. "Good under the wage system" (*Glascock*). Those who work with honest employers are happy (*2 Laurens*). Good when they are industrious and economical (*Schley, Marion, Chattahoochee, and Calhoun*). They are improving (*Quitman*).

LONG-LEAF PINE AND WIRE-GRASS REGION: Six counties report their condition generally poor and dependent. "Hardly comfortable" (*Worth*). Good as could be expected under the circumstances (*Coffee*). Fifteen counties report the condition *good or very good*. "It is daily improving" (*Berrien*). They have plenty to eat and wear, and are satisfied (*Decatur*).

COAST AND PINE-FLAT REGION: "It has not improved in the main" (*Chatham*). They are directly dependent on their earnings (*Wayne*). It is reported good in the other counties. "When they are industrious" (*Liberty*).

45. What proportion of negro laborers own the land or the houses in which they live?

NORTHWEST GEORGIA: Five counties report "not more than 1 in 20". "One in 10" (*Catoosa and Floyd*). "One in 4 or 5" (*Chattooga and Bartow*).

METAMORPHIC REGION: Twenty counties report that very few (not more than 1 in 100) own their farms. Five counties, "1 in 50"; fifteen counties, "1 in 25"; other counties, "1 in 10," or a larger proportion. "Nine in 10" (*Bibb*). "One in 100 owns land, 1 in 10 a mule, and about one-half of the laborers own a cow and four or five hogs each" (*Talbot*). "Many own lots in villages and cities, but few own farms" (*De Kalb, Monroe, and Coweta*).

CENTRAL COTTON BELT: Thirteen counties report not more than "1 in 100"; five counties, "1 in 50"; three counties, "1 in 20"; Richmond and Jefferson, a larger proportion, or "1 in 5". A few about towns own their own houses and huts.

LONG-LEAF PINE AND COAST COUNTIES: Seven counties only report "very few"; seven counties report "1 in 10 or 20"; and seven counties from "one-fourth to one-half". "Most of the negro laborers own land" (*Appling and Mitchell*). "The number is large and increases" (*Thomas*).

46. What is the market value of the land described in your county, and what rent is paid for such land?

IN NORTHWEST GEORGIA the best of lands are valued at high prices, in some instances as much as \$50 per acre, though the usual price for good lands is from \$8 to \$20. "Land that produces 1,000 pounds of seed-cotton per acre is valued at \$40, and rents at \$2 50 per acre". The usual rent is not in cash, but one-third of the grain and one-fourth of the cotton produced on it.

IN THE METAMORPHIC OR MIDDLE GEORGIA REGION, including also the Blue Ridge, the prices vary from \$5 to \$15, and even more, the rents being one-third of the grain and one-fourth of the cotton, or two bales of cotton for a thirty-five or forty-acre farm.

IN THE CENTRAL COTTON REGION the prices are lower, or from \$3

to \$10, with, of course, extra ones for extra lands. The rents are the usual proportion of the crops, or \$1 50 to \$3 per acre.

IN THE LIME-SINK DIVISION, or Screven and the counties of the southwestern part of the state, the prices of the best lands are from \$5 to \$10 per acre, and of the rest \$1 to \$5. The rent is one 500-pound bale for a one-mule farm, or the usual proportion of the crop.

IN THE PINE BARRENS AND COAST COUNTIES the prices are 50 cents for unimproved and \$3 to \$5 for improved lands; the rents, one-third to one-fourth of the crops, and sometimes only 25 or 50 cents per acre. For rice lands the rent is seven bushels of rice per acre.

47. How many acres or 400-pound bales, per hand, is your customary estimate?

IN THE NORTHWESTERN AND METAMORPHIC REGIONS the usual estimate is 14 or 15 acres, or from 5 to 8 bales per hand. If also a sufficient quantity of supplies is produced for a one-mule farm, the estimate is three bales in Murray and five in eight other counties. A few of the counties have a higher estimate.

In the southern half of the state the estimated acreage is about 20 per hand, and a yield of 4 or 5 bales, or 8 to 10 (500-pounds) bales to each "one-horse farm of 40 acres, requiring also two men." "Three hands with one mule will cultivate 20 acres in cotton and 20 in corn" (*Effingham*).

48. To what extent does the system of credits or advances upon the growing cotton crop prevail in your region?

NORTHWEST GEORGIA: Not to any extent in Catoosa and Gordon. Provisions to tenants in Murray and Chattooga, and "to a very great extent" in other counties. "Since the late war the great majority of the people have been in debt, and hence the system of credits and advances" (*Bartow*).

METAMORPHIC REGION: In all of the counties. To a small extent in Union, Hart, Banks, Haralson, and Fulton; but in all other counties to the extent of one-half or three-fourths of the value of the crop. "The laws of the state do not allow a lien on the crop, but credit is usually given by merchants" (*Lincoln, De Kalb, and Rockdale*). The system is decreasing in Banks, Cherokee, Clarke, Lincoln, Fulton, Newton, McDuffie, Warren, and Troup.

CENTRAL COTTON BELT: In all of the counties, but to a limited extent in Marion county. Advances are obtained by about one-half of the farmers to the extent of from one-half to three-fourths of the value of the crop for provision, supplies, and clothing.

LONG-LEAF PINE AND COAST REGION: To no extent in Camden county; limited in Appling, Coffee, Berrien, Montgomery, Wilcox, Chatham, Liberty, Wayne, Clinch, and Echols. In other counties it prevails to a very great extent, one-half or more of the farmers obtaining advances to the value of a large part of their crops. The system is declining in Brooks, Montgomery (liens only on live stock), Telfair, Coffee, and Clinch.

49. At what stage of its production is the cotton crop usually covered by insurance?

NORTHWEST GEORGIA: Not at all in most of the counties while in possession of the farmer. "Not until it is in the gin-house, and not often then" (*Floyd*).

METAMORPHIC REGION: The growing crop is not insured. Wilkes, Columbia, Putnam, Coweta, Upson, and Crawford report insurance on gin-houses in which cotton is stored.

CENTRAL COTTON BELT: "Often as soon as the seed is planted; the practice is not general" (*Webster*). In all other counties cotton is not insured while growing; and only Richmond,

Laurens, Chattahoochee, and Sumter report insurance on gin-houses by a few of their owners when the picking season comes.

LONG-LEAF PINE AND COAST REGIONS: "In some cases as soon as the seed is planted" (*2 Thomas, 2 Screven*). As soon as it is up, sometimes earlier (*Worth*). "When it reaches the gin" (*Telfair*). Not at all in all other counties, or while in the hands of the planter.

50. What are merchants' commissions and charges for storing, handling, shipping, insurance, etc.; and what is the total amount of these charges against the farmer per pound or per bale?

Merchants' commissions vary from 50 cents per bale to as much as 2½ per cent. of the selling price; storage, 25 to 50 cents per month (which in some cases covers also the weigher's fee); insurance, from 10 to 20 cents per month; weighing, usually 25 cents, sometimes 10, the total amount, with cost of transportation, being from ¼ to 1 cent per pound of lint, or from \$2 50 to \$5 per bale of 500 pounds. Planters very generally

sell their cotton from their wagons to local buyers at the nearest railroad station, escape all charges other than that for weighing, and receive quotation prices of the nearest general or city market, less the cost of transportation. In northwest Georgia the cost of transportation to and sale in New York is from \$1 10 to \$1 20 per bale.

51. What is your estimate of the cost of production in your region, exclusive of such charges, and with fair soil and management?

In answer to this, forty-six counties report an estimate of 8 cents per pound, thirty-one counties from 8 to 10 cents, twelve counties 7 and 7½ cents, and thirteen counties 5 to 6 cents. "Not more than from 3 to 6 cents per pound, if necessary supplies are raised with it and all under good management" (*Richmond, Hart, and Laurens*); "8 cents if provisions are raised at home, 10 cents otherwise" (*1 Screven and Marion*). Sea-island cotton can be raised profitably for 25 cents per pound for common and 50 cents for fine staple (*2 Liberty*). "With cotton at 10 and 11 cents per pound, and the cost of production at from 8 to 9½ cents per pound, the farmer about

makes a living if he raises his own provisions, but lays up no money. The *intensive system*, that is, the culture of fewer acres, *highly fertilized* and cultivated with improved labor-saving implements, combined with the production of an abundant supply of provisions, arising from diversified crops, is the policy to be adopted. Our hills and valleys will then become clothed with flocks and covered with corn, and the husbandman can sit beneath his vine and fig tree and smoke his pipe with composure amid plenty and contentment (*Muscogee*).

Cost of each item of labor and material expended in the cultivation of an acre of cotton.

Items.	Polk county.	Fulton county.	Walton county.	Lincoln county.	Monroe county.	Muscogee county.	Screven county.
Rent.....		\$2 00 to \$2 25		\$2 00	\$0 80	\$4 00	\$2 00
Fencing, repairs, and interest.....		2 50	\$0 50	2 00	3 00	0 15	0 35
Knocking stalks.....	\$0 25	0 50		0 50	0 20	0 15	0 25
Other cleaning up.....		0 50	0 50				
Listing.....					0 50		
Breaking up.....	1 00	0 05 to 0 75	1 00		0 50	1 25	
Barring old beds.....		0 30 to 0 50					0 45
Reversing.....					0 50		1 25
Laying off.....	0 25	0 25 to 0 40	0 20		0 20	0 30	
Manuring, commercial.....	4 00	4 00 or	4 50	4 00	5 00	3 00	5 00
Manuring, home-made.....		3 25		6 00	2 00		
Applying manures.....	0 25	0 40 or 1 50	0 10		0 50	0 30	0 15
Bedding up.....	1 00	0 30 to 0 50	1 00	0 75	0 50	1 25	
Splitting middles.....		0 30			0 25		
Planting, opening.....	0 25	0 40	0 20		0 20		0 10
dropping.....	0 25	0 15 to 0 20	0 10	0 50	0 15	0 75	0 10
covering.....	0 25	0 20 to 0 35	0 20		0 20		0 10
Seed.....	0 25	0 25 to 0 35	0 15		0 50	0 40	0 15
Thinning.....	1 00	0 50 to 0 60	0 50		0 60	0 50	
Number of plowings.....	1 00	2 00 to 2 50	1 50	1 00		3 00	2 00
Number of hoeings.....	0 75	2 00 to 2 50	2 00	1 55		2 50	1 50
Total.....	10 50	10 25 to 10 00	12 45	18 80	15 60	17 55	13 40
<i>Other expenses.</i>							
Picking, per hundred-weight.....	0 50	0 37½ to 0 40	0 50	1 25	0 40	0 40	0 50
Hauling to gin.....	0 50	0 50	0 50		0 10	1 00	0 50
Ginning, per hundred-weight.....		5 lbs. lint	0 14	0 10	0 50	0 10	0 15
Management.....		0 40 to 0 50				1 50	0 50
Other items.....	8 50	0 80		2 00			1 00

REMARKS.

2 POLK COUNTY: The renter does not usually pay for repairs of fencing, etc. Ginning costs one-twentieth of the lint ginned. Estimates of the cost of raising an acre of cotton vary from \$12 to \$15.

1 FULTON COUNTY: The old stalks are, as a part of the compost heap, worth the trouble of clearing them from the field. Preparatory to planting, the cotton-seed is rolled in strong lye from the compost heap.

2 LINCOLN COUNTY: In the list of items of expense the cost of home-made manure and application is put at \$6. It may also be added that twenty bushels of cotton-seed, applied as manure to an acre, cost \$2 50; but, considering only commercial fertilizers (as they are chiefly used), the cost of raising an acre of cotton (830 pounds of seed-cotton or half a bale of lint) and delivering in Augusta is \$15 50. At the prices of 1879 and 1880 the lint will bring \$25, and the seed, at 10 cents per bushel, \$1 80; together, \$26 80, leaving a profit to the producer of \$11 30. Estimates, of course, vary with seasons, manner of cultivation, soil, etc. Cotton culture can be much more profitably carried on by less acreage, more manuring, and better preparation of the soil. More cotton from less acreage and a greater acreage of cereals, sorghum, potatoes, etc., will materially lessen the cost of cotton production. This greater yield of cotton can easily be obtained by green manuring with cow-pease and returning to the soil all cotton-seed, together with acid phosphate. Such soil improvement would also check the tendency to rust, which evil is yearly increasing. One serious hinderance to such advances in methods of cultivation is the tenacious adherence of the negro to the old ante-bellum usages; he loves to cultivate cotton, and loves the old methods, and to adhere to them seems to be with him a constitutional habit. But the negro cannot be dispensed with; the white laborer, native or foreign, cannot compete with him as a cotton raiser, and cotton must for many years continue to be the chief crop, the only one that yields cash returns.

There is profit in cotton crops if food enough for man and beast is raised at home. Ten years ago these profits were swallowed up by the cost of corn and bacon. The year 1879 was an unusually profitable one for the cotton-planter of Georgia, although the price was lower than hitherto.

Rent here is about 30 pounds of lint per acre; this amounts to about \$2. Rails are used exclusively for fencing, old-field pine rails, when split and "put up", costing 55 to 65 cents per hundred; of oak or other good timber, 60 to 75 cents per hundred. The pine rails last two years; oak will last eight or ten years. It costs \$5 per acre to fence a 50-acre field with pine rails for ten years, or about \$3 with oak rails; but as the fencing is never done as it should be, the actual costs are about \$2 to \$2 50 with pine, or \$1 with oak per acre, yearly, on 50-acre fields.

When stubble is very heavy it is sometimes burned in dry weather, and rubbish is sometimes cleared from fresh fields; otherwise stalks and stubble are generally plowed under. But in any case a high average rate per acre for all such clearing off would be 50 cents.

In preparing cotton land, my own operations consist in first locating the beds by laying off furrows 4 feet apart with a shovel-plow as deep as it can be done. Into these furrows I put another with a bull-tongue plow. I next put a small turning-plow on each side of this with the same bull-tongue plow, and then bed out the rows with a larger turning-plow. The land is then ready for planting.

Two plows can bed up $1\frac{1}{2}$ acres per day. The hire of hands per day is 30 cents, their board 25 cents, and the horses 30 cents per day; cost of gear and wear and tear will make the day's plowing worth about \$1. The two will plow, in stubble land, $1\frac{1}{2}$ acres, making the whole cost about 75 cents per acre for the plowing in the preparation of an acre for planting.

Manuring.—It is the common practice here to open the top of the bed with two furrows, one in the other, then with a tin tube $3\frac{1}{2}$ feet long, having a funnel-shaped mouth, distribute about one hundred pounds of commercial fertilizers to the acre. This can be done by one hand at the rate of an acre per hour. A great many, instead of opening the middle of the bed, put their fertilizers in the water furrow and rebed back. My plan is to put the fertilizers in at the first bedding up; if it is cotton-seed or stable manure, to bed upon it, and open and plant afterward; if it be a commercial fertilizer, I frequently put it in with the seed and cover both with a block or double-footed plow, and board it off afterward if the ground is rough.

The whole process with commercial fertilizer will require three hours with horse and plow and one hour with the horn, or the same time to distribute cotton-seed to each acre manured; but where stable manure or compost is used it will require four hours to distribute it over an acre as it should be. The cost of applying commercial fertilizers or cotton-seed per acre is 50 cents; of home-made manure, 75 cents.

The usual cost of planting is 25 cents per acre; it costs me 35 cents. I use a double-footed plow first with a board or harrow behind. I usually plant cotton on stubble land and exercise great care to obtain a stand. I never replant cotton, and it is rarely done in this locality. If the stand is insufficient, farmers prefer to plow up and plant again even as late as May 15. In after-cultivation, a plow will cultivate three acres per day of rows three feet apart, or four acres of rows four feet apart. The day's plowing being worth 75 cents, the cost per acre is 25 cents for 3-foot rows, or about 20 cents for 4-foot rows.

Cotton should always have four plowings if it takes till the middle of August. In very wet seasons the cost of cultivation is doubled and the turning-plow is used exclusively. Hoeing is the most expensive part of cotton culture, especially in wet or even in average seasons. The first use of the hoe consists in chopping out the row of young cotton to bunches of from two to six plants. A good hand can chop out an acre a day; this is worth 50 cents. The next hoeing is to bring cotton to a stand; this requires one and one-half days, and costs 75 cents. The next hoeing is comparatively easy if the weather is not rainy, and costs about 30 cents. The second, or June, hoeing is much the most tedious and costly if wet weather prevail. A first-rate hand may only hoe a quarter of an acre per day with hard work, and leave a bad stand. In a favorable season the hoeing amounts to \$1 55 per acre, or twice as much in a wet season.

For picking, hands receive 30 cents per 100 pounds of seed-cotton and their board, or 45 cents without board. The so-called outside hands do more than half the picking. That picked by the regular hands costs about 20 cents per 100 pounds; the average cost of picking is therefore about 25 cents per 100 pounds, or \$2 per acre of 800 pounds.

Very little seed-cotton is hauled to gins except by a few small farmers. The cost of ginning an acre of seed-cotton (800 pounds) is about \$1; steam gins do it for less, but in that case occurs the expense of hauling to them. The costs of wear and tear of gin and press amount at least to 25 cents per 800 pounds; this makes the cost of ginning an acre \$1 25.

MONROE COUNTY: Stalks, etc., are plowed under. The estimates are based upon a good season for crops; some of them are too low when there is much rain in the spring.

MUSCOGEE COUNTY: The estimates are based upon a yield of 600 pounds of seed-cotton per acre.

1 SCREVEN COUNTY: The estimates assume a yield of 600 pounds per acre, and that the land produced cotton the preceding season.

In this section pulling and burning stalks, bedding up with hoes (a good practice), and harrowing before planting are not usually practiced. The after-cultivation consists of four plowings and three hoeings, each estimated at 50 cents per acre. The estimates are based upon reasonable and ordinary rates; and in many instances, even in this section, much more work is done than is above accounted for, both in the preparation and in the subsequent cultivation of cotton land. The seed is sometimes given for ginning.

TROUP COUNTY: Lands cannot be made too rich for cotton. Prepare them well, keep the manure as near the surface as possible, plant shallow, do not plant too thick, cultivate fast and shallow, and if a growth of 2 feet is obtained by July 15 a good crop is assured if the seasons are favorable (*J. F. Jones*).

COST OF PICKING.

Cotton picking season is a noted time among the rural population, but especially among the idlers around the towns. "Two hands and one mule can make more than they can pick", and but for extra labor much of the crop would probably remain in the fields. The price paid for picking varies but little throughout the state, as will be seen from the following answers:

J. H. DUNCAN, Elbert county; **J. B. ROBERTS, Washington county;**
J. H. DANIEL, Burke county; **S. M. GRIFFIN, Brooks county;**
and S. C. PRUDDEN, Putnam county: The price paid for picking cotton is from 40 to 50 cents per 100 pounds of seed-cotton, with board, or 75 cents without, for day laborers.

F. H. NICHOLS, Forsyth county: It is customary to pay 50 cents per 100 pounds. The picking is usually weighed every night and laborers paid in money. In some instances the producer pays as high as 75 cents, the laborer boarding himself; but this depends upon the condition, stand, and other items dependent upon gathering the crop at the time.

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R. F. MILLER, Coweta county: When cotton begins to open laborers are paid 40 cents per 100 pounds. As the season advances more is paid. When a field is all open, and danger from rain storms apprehended, as high as 75 cents per 100 pounds is paid. Fifty cents per 100 is the average price, and the picker feeds himself. Very few will work by the day picking cotton. A sorry hand will demand as much as a good one, and an expert can make from \$1 25 to \$2 per day in a good field when picking by the 100 pounds.

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